



AF 12155
STW

PTO/SB/21 (09-04)

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number 09/708,179

Filing Date November 7, 2000

First Named Inventor Nakajima

Art Unit 2155

Examiner Name Tran, Philip B.

Attorney Docket Number 109908-130332

ENCLOSURES (Check all that apply)

| | | |
|--|--|--|
| <input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53 | <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD | <input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input checked="" type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): Return Receipt Postcard |
|--|--|--|

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

| | | | |
|--------------|-----------------------------------|----------|--------|
| Firm Name | Schwabe, Williamson & Wyatt, P.C. | | |
| Signature | | | |
| Printed name | Kyle H. Flindt | | |
| Date | November 28, 2005 | Reg. No. | 42,539 |

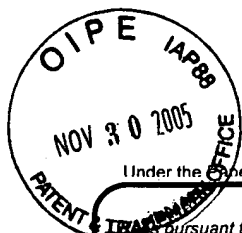
CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

| | | | |
|-----------------------|------------------|------|-------------------|
| Signature | | | |
| Typed or printed name | Christine Chaves | Date | November 28, 2005 |

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



PTO/SB/17 (12-04v2)

Approved for use through 07/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Effective on 12/08/2004.

Pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL

For FY 2005

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$)

250

Complete if Known

| | |
|----------------------|------------------|
| Application Number | 09/708,179 |
| Filing Date | November 7, 2000 |
| First Named Inventor | Nakajima |
| Examiner Name | Tran, Philip B. |
| Art Unit | 2155 |
| Attorney Docket No. | 109908-130332 |

METHOD OF PAYMENT (check all that apply)☒ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____☒ Deposit Account Deposit Account Number: 500393 Deposit Account Name: Schwabe Williamson et al.

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☐ Charge fee(s) indicated below☐ Charge fee(s) indicated below, except for the filing fee☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17☒ Credit any overpayments**WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**FEE CALCULATION****1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

| Application Type | FILING FEES | | SEARCH FEES | | EXAMINATION FEES | | Fees Paid (\$) |
|------------------|-------------|-----------------------|-------------|-----------------------|------------------|-----------------------|----------------|
| | Fee (\$) | Small Entity Fee (\$) | Fee (\$) | Small Entity Fee (\$) | Fee (\$) | Small Entity Fee (\$) | |
| Utility | 300 | 150 | 500 | 250 | 200 | 100 | |
| Design | 200 | 100 | 100 | 50 | 130 | 65 | |
| Plant | 200 | 100 | 300 | 150 | 160 | 80 | |
| Reissue | 300 | 150 | 500 | 250 | 600 | 300 | |
| Provisional | 200 | 100 | 0 | 0 | 0 | 0 | |

2. EXCESS CLAIM FEES**Fee Description**

Each claim over 20 (including Reissues)

| Fee (\$) | Small Entity Fee (\$) |
|----------|-----------------------|
| 50 | 25 |
| 200 | 100 |
| 360 | 180 |

Each independent claim over 3 (including Reissues)

Multiple dependent claims

| | | | |
|--------------------------|--------------|----------|---------------|
| Total Claims | Extra Claims | Fee (\$) | Fee Paid (\$) |
| _____ - 20 or HP = _____ | x _____ | = _____ | |

HP = highest number of total claims paid for, if greater than 20.

| | | | |
|-------------------------|--------------|----------|---------------|
| Indep. Claims | Extra Claims | Fee (\$) | Fee Paid (\$) |
| _____ - 3 or HP = _____ | x _____ | = _____ | |

HP = highest number of independent claims paid for, if greater than 3.

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

| | | | | |
|---------------------|--------------|--|----------|---------------|
| Total Sheets | Extra Sheets | Number of each additional 50 or fraction thereof | Fee (\$) | Fee Paid (\$) |
| _____ - 100 = _____ | / 50 = _____ | (round up to a whole number) x _____ | = _____ | |

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Appeal Brief Filing Fee (Small Entity)

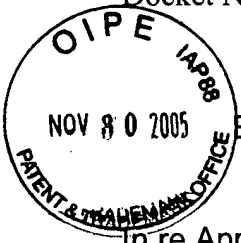
250

SUBMITTED BY

| | | | | | |
|-------------------|-----------------------|-----------------------------------|--------|-----------|-------------------|
| Signature | <u>Kyle H. Flindt</u> | Registration No. (Attorney/Agent) | 42,539 | Telephone | 503-222-9981 |
| Name (Print/Type) | Kyle H. Flindt | | | Date | November 28, 2005 |

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application for:

Nakajima

Application No.: 09/708,179

Filed: November 7, 2000

Confirmation No.: 1119

For: METHOD AND APPARATUS FOR
SENDING AND RECEIVING A
DATA STRUCTURE IN A
CONSTITUTING ELEMENT
OCCURRENCE FREQUENCY
BASED COMPRESSION FORM

Examiner: Tran, Philip B.

Art Group: 2155

Customer No.: 25,943

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450 on this date: November 28, 2005

Typed or Printed: Christine Chaves

Signature: Christine Chaves Date: 11/28/05

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Appellant's Brief Under 37 C.F.R. §1.192 In Support Of
Appellant's Appeal To The Board Of Patent Appeals And Interferences

Dear Sir:

The Appellant hereby submits, in triplicate, this Brief in support of its appeal from an Advisory Action dated September 28, 2005, indicating a final decision by the Examiner to enter the proposed amendments and to reject claims 1-4, 6-8, 10-16, 18-21, and 23-26, in the above referenced case. The final decision was in response to amendments and arguments filed on September 6, 2005, in response to an earlier final office action mailed June 28, 2005. Appellant respectfully requests consideration of this appeal by

11/30/2005 NNGUYEN1 00000018 09708179

01 FC:2402

250.00 0P

the Board of Patent Appeals and Interferences for allowance of the present patent application.

(1) Real Party in Interest

The real party in interest is UIEvolution, Inc., a corporation having its primary place of business at 155 108th Avenue NE, Bellevue, WA 98004. The assignment to UIEvolution, Inc. was recorded under Reel/Frame Nos. 011398/0931.

(2) Related Appeals and Interferences

To the best of Appellant's knowledge, there are currently no appeals or interferences related to the present appeal, which will directly affect, be directly affected by, or have a bearing on the Board's decision.

(3) Status of the Claims

Claims 1-4, 6-8, 10-16, 18-21, and 23-26 remain pending and are reproduced, as pending, in Appendix A. Claims 5, 9, 17, and 22 were previously cancelled without prejudice.

Claims 1-4, 6-8, 10-16, 18-21, and 23-26 were rejected under 35 USC §102(b) as being anticipated by European Patent Application No. 0 896 284 A1 to *Murashita* (hereinafter "Murashita"). The Appellant appeals the rejection of claims 1-4, 6-8, 10-16, 18-21, and 23-26.

(4) Status of Amendments

In the Advisory Action dated September 28, 2005, the Examiner noted the entry of the proposed amendments for purposes of appeal to claims 8 and 10 from the Appellant's response mailed September 6, 2005. The claims are reproduced as amended in Appendix A. No further claim amendments have been made since the mailing date of the Advisory Action on September 28, 2005. Appellant appeals the rejection of amended claims 8 and 10.

(5) Summary of the Claimed Subject Matter

Embodiments of the present invention include novel methods and apparatuses for sending and receiving of data structures (item 106 in Figure 1; items 300, 310, and 320 in Figures 3a-3c; items 400, 410 in Figure 4a; page 13, line 9 to page 14, line 8; page 6, line 21 to page 9, line 15) in a bandwidth reduction form. In particular, the methods and apparatuses, as clarified in the claims, involve the novel substitution (items 202 – 228 in Figures 2a & 2b; page 8, line 23 to page 13, line 7) of unique constituting elements (page 3, lines 6 - 14) in the data structure with cookie representations (item 302 in Figure 3a; Figure 4e; page 7, lines 4-10; page 9, line 17- page 11, line 3; page 12, lines 4-26; page 13, lines 13-17), and the novel provision of a list (Figures 4a-4f; block 210 in Figure 2a; block 212 in Figure 2b; page 10, lines 9-18; page 11, line 8-page 12, line 26) of the unique constituting elements in the data structure in the order of their occurrence frequencies (Figure 4f; page 9, lines 19-22; page 12, lines 15-26). Embodiments of the present invention also include the novel inference (Figures 2a-2b & 4e; page 10, line 21 to page 11, line 3) of the corresponding cookie representations of the unique constituting elements at a receiver (items 114 &

116 in Figure 1) in accordance with the received list, such that upon receiving a further transmission of the data structure in a representative form (Figure 4d & 4f; page 12, lines 7-9) encoded with the cookie representations, the receiver may accurately reconstruct the original data structure using the inferred cookie representations (Figure 3c; page 13, line 20; page 14, line 8).

(6) Grounds of Rejection To Be Reviewed On Appeal

- I. Whether claims 1-4, 6-8, 10-16, 18-21, and 23-26 are patentable under 35 U.S.C. §102(b) over European Patent Application No. 0 896 284 A1, to Murashita.

(7) Argument

- I. Rejection of claims 1-4, 6-8, 10-16, 18-21, and 23-26 under 35 U.S.C. §102(b) was improper because Murashita failed to teach each and every limitation of these claims.

In rejecting claims 1-4, 6-8, 10-16, 18-21, and 23-26, the Examiner relied on European Patent Application No. 0 896 284 A1, to Murashita ("Murashita").

The law is well settled that anticipation under 35 U.S.C. §102 requires the disclosure in a single piece of prior art of *each and every* limitation of a claimed invention. See e.g. *Electro Med. Sys. S.A. v. Cooper Life Sciences*, 34 F.3d 1048, 1052, 32 USPQ2d 1017, 1019 (Fed. Cir. 1994) and *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Thus to anticipate the present invention, Murashita, the prior art relied upon by the Examiner, must disclose and teach each and every element recited in claims 1-4, 6-8, 10-16, 18-21, and 23-26.

Furthermore, anticipation requires that each claim element must be identical to a corresponding element in the applied reference. *Glaverbel Société Anonyme v.*

Northlake Mktg & Supply, Inc., 45 F.3d 1550, 1554 (Fed. Cir. 1995). As such, identical corresponding elements for Murashita, the prior art relied upon by the Examiner, must disclose and teach each and every element

Moreover, anticipation also requires that not only must the claim be expressly or inherently described, but also that "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Accordingly, the "absence from the reference of any claimed element negates anticipation." *Kloster Speedsteel AB v. Crucible, Inc.*, 793 F.2d 1565, 1571; 230 USPQ 81, 84 (Fed. Cir. 1986).

"Analysis begins with a key legal question – *what* is the invention claimed?" *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1567; 1 USPQ2d 1593, 1597 (Fed. Cir. 1987).

Here, Claim 1 recites:

1. A method comprising:
receiving a plurality of constituting elements of a data structure;
determining occurrence frequency of each unique constituting element in said data structure;
assigning a cookie representation to each of said unique constituting elements
based at least in part on the occurrence frequencies of said unique constituting elements;
transmitting a list of said unique constituting elements in the order of their occurrence frequencies to allow a receiver of said list of said unique constituting elements to infer the corresponding cookie representations of the unique constituting elements; and
transmitting said data structure in a representative form encoded with said cookie representations

Claims 8, 13, and 21 contain in part similar language.

For ease of discussion, hereinafter, the five operations of claim 1 shall be referred to as the RECEIVE, DETERMINE, ASSIGN, TRANSMIT ORDERED ELEMENT LIST and TRANSMIT ENCODED DATA STRUCTURE operations, respectively, and the “list of said unique constituting elements in the order of their occurrence frequencies” shall be referred to as ***ordered element list***.

Thus, in accordance with the plain meaning of the language reciting the limitations, as understood by those of ordinary skill, the invention being claimed requires:

- a) a data structure with a plurality of constituting elements and a representative form of the data structure;
- b) a cookie representation associated with each unique constituting element, the representative form of the data structure being encoded with the cookie representations;
- c) an ***ordered element list*** from which the cookie representations may be inferred by a receiver; and
- d) performance of the RECEIVE, DETERMINE, ASSIGN, TRANSMIT ORDERED ELEMENT LIST and TRANSMIT ENCODED DATA STRUCTURE operations.

Upon receiving a plurality of constituting elements of a data structure, embodiments as claimed in the present invention determine the occurrence frequency of each unique constituting element in the data structure and assign a cookie representation to each unique constituting element based on the determined occurrence frequency. An ***ordered element list*** is transmitted to a receiver, enabling the receiver to infer the cookie representations. Once the cookie representation assignment is made in the ASSIGN operation, the data structure may be encoded with the cookie representations into a representative form. Once the ***ordered element list*** is sent, a representative form of the original data structure encoded with cookie representations is

transmitted. As will be readily apparent from the discussion to follow, Murashita does not transmit “a list of said unique constituting elements **in the order of their occurrence frequencies** to allow a receiver ... **to infer** the corresponding **cookie** representations of the unique constituting elements” as recited in claim 1 of the instant application.

In rejecting claim 1, the Examiner relied on Murashita (European Patent Application No. 0 896 284 A1). In particular, the Examiner asserted that Murashita anticipated the enumerated RECEIVE, DETERMINE, ASSIGN, TRANSMIT ORDERED ELEMENT LIST and TRANSMIT ENCODED DATA STRUCTURE operations. Specifically, the Examiner asserted Murashita’s “SGML document with DTD” anticipated the required data structure with a plurality of constituting elements and a representative form of the data structure, Murashita’s “assigning a code according to the counting to the tag to create a dictionary of tags” anticipated the required cookie representation associated with each unique constituting element, Murashita’s “dictionary of tags” anticipated the required **ordered element list** to allow a receiver to infer the corresponding cookie representation, and Murashita’s disclosure in the Abstract, Figs. 11-13, Page 2, Lines 10-58 and page 19, line 42 to page 20 line 52, anticipated the required operations. The Appellant appeals the rejection of claims 1, 8, 13, and 21 on the inadequacy on Murashita’s disclosure.

“Having construed the claim limitations at issue, we now compare the claims to the prior art to determine if the prior art anticipates those claims.” *In re Cruciferous Sprout Litig.*, 301 F.3d 1343, 1349; 64 USPQ2d 1202, 1206 (Fed. Cir. 2002). As will be readily apparent from the discussion to follow, Murashita does not disclose “transmitting a list of said unique constituting elements in the order of their occurrence frequencies to allow a receiver ... to infer the corresponding cookie representations of the unique constituting elements” as recited in claim 1 of the instant application.

Fundamentally, Murashita teaches compressing and decompressing data in a tag document. Namely, during compression in Murashita, a tag extracting unit (30) scans the document type definition (DTD) of an inputted tag document to extract a tag code, a tag code table creating unit (40) assigns a predetermined code to the tag in the document type definition (DTD) based on the extracted tag, and a tag coding unit (60) codes the tag in the document instance based on the tag code table to compress the tag document. Moreover, Murashita teaches the compression of a document instance based on minimizing tag repetition within the document through the creation and use of a "dictionary of tags" that is a statistical, quasi-dynamic dictionary for the document instance. The tag codes used in Murashita for the dictionary of tags are assigned based on the frequency of occurrence of a tag in the document instance; specifically, each tag in Murashita is assigned a code according to the tag frequency (i.e. Murashita assigns shorter code to a tag occurring more frequently). This reduces the size of the document, because the more frequently used tags have the smaller code.

The creation and use of the tag dictionary is further clarified in Figure 22 of Murashita, which illustrates a tag counting unit (151) to count "the number of times of coincidence of each of the tags" held in the tag holding unit (152). The tag counting unit (151) uses the collected information "to calculate the frequency of occurrence of each of the tags" in the document instance. Moreover, the last sentence of paragraph [0199] of Murashita clarifies that "the occurrence frequency information on each of tags counted by the tag counting unit 151 is outputted to the decoding side through the code information outputting unit 112 as information used to create the same dictionary as the coding side by the decoding side." (See at least page 20, paragraph 198 and 199; and Figure 22). **Thus, it is not a list of the tags being transmitted in Murashita, but a list of codes.** In contrast, the present invention specifically calls for the transmission of an ordered "list of said unique constituting elements" (i.e., NOT a list of cookie

representations) where the list is then used “to infer the corresponding cookie representations” by a receiver.

Murashita does not assign “**a cookie** representation **to each** of said unique constituting elements” and transmit “**a list** of said unique constituting elements **in the order of their occurrence frequencies** to allow a receiver ... **to infer** the corresponding **cookie** representations of the unique constituting elements” as recited in claim 1 of the instant application.

This distinction between an **ordered element list** transmitted in order of occurrence frequencies as recited in the claims at issue and the tag dictionary of codes whose respective sizes are based on relative tag usage within the document as shown in Murashita is significant. Namely, an encoder operating in accordance with the teachings of Murashita would explicitly inform the decoder what the codes are for the various tags (which requires transmission of corresponding pairs of a tag and respective codes), whereas an encoder operating in accordance with the claimed methods would merely provide the required **ordered element list** and the decoder would need to infer the cookie representations therefrom.

Claims 8, 13, and 21 include the same “**ordered element list**.” limitation of claim 1, accordingly, for at least the same reasons; claims 8, 13, and 21 are patentable over Murashita.

Claims 2-4, 6-7, 10-12, 14-16, 18-20 and 23-26 depend on claims 1, 8, 13 or 21, incorporating their limitations. Accordingly, for at least the same reasons, claims 2-4, 6-7, 10-12, 14-16, 18-20 and 23-26 are patentable over Murashita.

II. Rejection of claims 7, 12, 19, and 25 under 35 U.S.C. §102(b) was improper because Murashita failed to teach what is claimed.

Additionally, dependent claims 7, 12, 19, and 25 are further patentable over Murashita because of the respective additional limitations required. Claim 7 recites:

7. The method of claim 1, wherein said data structure is an XML data structure, and said constituting elements comprise tag names, attribute names and attribute values.

Claims 12, 19, and 25 contain, in part, similar language.

Previously, it was shown that claim 1 recited “assigning a cookie representation to each of said unique constituting elements based at least in part on the occurrence frequencies of said unique constituting elements” as one of the required limitations.

Thus, the combination of the required limitation of “assigning a cookie representation ... based at least in part on the occurrence frequencies of said unique constituting elements” from claim 1 and the limitation that “constituting elements comprise tag names, attribute names **and** attribute values” as recited in dependent claim 7 would require the asserted equivalent element in Murashita to incorporate language indicating that the “occurrence frequency” of “tag names, attribute names **and** attribute values” were determined. As Murashita merely teaches assigning binary or hexadecimal code to “document instance data”, Murashita fails to anticipate the embodiments described in claims 7, 12, 19, and 25 of the instant application. More specifically, Murashita does not teach or suggest “**determining the frequency**” of those document instance data values. (See at least page 20, paragraph 201; and Figures 13, 32 and 33 of Murashita). The **only** discussion in Murashita related to frequency is limited to teachings regarding the tags. Therefore, Murashita fails to teach or suggest the necessary operation of determining the occurrence frequency of “tag names, attribute names and attribute values” as required. Accordingly, for at least the foregoing

additional reasons, Claims 7, 12, 19, and 25 of the instant application are believed to further be patentable over Murashita.

(8) Conclusion

Appellant respectfully submits that all the appealed claims in this application are patentable and requests that the Board of Patent Appeals and Interferences overrule the Examiner and direct allowance of the rejected claims.

(9) Epilogue

This brief is submitted in triplicate, along with a check for \$250 to cover the filing of appeal brief fee for a small entity as specified in 37 C.F.R. §1.17(c). We do not believe any fees, in particular extension of time fees, are needed. However, should that be necessary, please charge our Deposit Account No. 500393. In addition, please charge any shortages and credit any overages to Deposit Account No. 500393.

Respectfully submitted,
Schwabe, Williamson & Wyatt, P.C.

Dated: Monday, November 28, 2005


By Kyle H. Flindt, Reg No. 42,539
Attorney for Appellant Applicants



Appendix A – Claims As Pending

1. (Previously Presented) A method comprising:
 - receiving a plurality of constituting elements of a data structure;
 - determining occurrence frequency of each unique constituting element in said data structure;
 - assigning a cookie representation to each of said unique constituting elements based at least in part on the occurrence frequencies of said unique constituting elements;
 - transmitting a list of said unique constituting elements in the order of their occurrence frequencies to allow a receiver of said list of said unique constituting elements to infer the corresponding cookie representations of the unique constituting elements; and
 - transmitting said data structure in a representative form encoded with said cookie representations.
2. (Original) The method of claim 1, wherein said determining and assigning comprises assigning an initial cookie representation to each unique constituting element as the constituting elements are received, and tracking occurrence frequencies of the unique constituting elements, and upon receipt of all constituting elements of the data structure, re-assigning a final cookie representation for each of the unique constituting elements based on the occurrence frequencies of the unique constituting elements.

3. (Original) The method of claim 2, wherein the method further comprises ordering said unique constituting elements based on their occurrence frequencies.

4. (Original) The method of claim 2, wherein the method further comprises storing said constituting elements of the data structure as they are received, using said initial cookie representations, and subsequently replacing the stored initial cookie representations with the final cookie representations, and said transmitting comprises transmitting said constituting elements of said data structure using said final cookie representations.

5. (Previously Cancelled Without Prejudice).

6. (Original) The method of claim 1, wherein the cookie representations are numeric in form, with the cookie representations of the 128 most frequently occurred unique constituting elements having a size of one byte each, and the cookie representations of the next 32,640 most frequently occurred unique constituting elements having a size of two bytes each.

7. (Original) The method of claim 1, wherein said data structure is an XML data structure, and said constituting elements comprise tag names, attribute names and attribute values.

8. (Previously Presented) A method comprising:
receiving a plurality of unique constituting elements of a data structure transmitted in a pre-determined order;

inferring a plurality of corresponding cookie representations for the received unique constituting elements in accordance with their manner of transmissions under the pre-determined order of transmission; and

receiving the constituting elements of the data structure in a representative form encoded with cookie representations.

9. (Previously Cancelled Without Prejudice).

10. (Previously Presented) The method of claim 8, wherein said inferring comprises inferring a unique one-byte numeric representation for each of the first 128 unique constituting elements transmitted, and a unique two-bytes representation for each of the next 32,460 unique constituting elements transmitted.

11. (Original) The method of claim 8, wherein the method further comprises reconstituting the constituting elements of the data structure, received in said representative form, based on the inferred cookie representations.

12. (Original) The method of claim 8, wherein said data structure is an XML data structure, and said constituting elements comprises tag names, attribute names and attribute values.

13. (Previously Presented) An apparatus comprising:
storage medium having stored therein a plurality of programming instructions designed to receive a plurality of constituting elements of a data structure, determine occurrence frequency of each unique constituting element in

said data structure, assign a cookie representation to each of said unique constituting elements based at least in part on the occurrence frequencies of said unique constituting elements, transmit a list of said unique constituting elements in the order of their occurrence frequencies to allow a receiving of said list of said unique constituting elements to infer the corresponding cookie representations of the unique constituting elements, and transmit said data structure in a representative form encoded with said cookie representations; and;

at least one processor coupled to the storage medium to execute the programming instructions.

14. (Original) The apparatus of claim 13, wherein said programming instructions are designed to perform said determining and assigning by assigning an initial cookie representation to each unique constituting element as the constituting elements are received, and tracking occurrence frequencies of the unique constituting elements, and upon receipt of all constituting elements of the data structure, re-assigning a final cookie representation for each of the unique constituting elements based on the occurrence frequencies of the unique constituting elements.

15. (Original) The apparatus of claim 14, wherein the programming instructions are further designed to order said unique constituting elements based on their occurrence frequencies.

16. (Original) The apparatus of claim 14, wherein the programming instructions are further designed to store said constituting elements of the data

structure as they are received, using said initial cookie representations, and subsequently replace the stored initial cookie representations with the final cookie representations, and said programming instructions perform said transmitting by transmitting said constituting elements of said data structure using said final cookie representations.

17. (Previously Cancelled Without Prejudice).

18. (Original) The apparatus of claim 13, wherein the programming instructions are deigned to employ cookie representations in numeric form, with the cookie representations of the 128 most frequently occurred unique constituting elements having a size of one byte each, and the cookie representations of the next 32,640 most frequently occurred unique constituting elements having a size of two bytes each.

19. (Original) The apparatus of claim 13, wherein said programming instructions are designed to perform said receive, determine, assign and transmit for an XML data structure, said constituting elements comprising tag names, attribute names and attribute values.

20. (Original) The apparatus of claim 13, wherein said apparatus is a selected one of a wireless mobile phone, a palm sized personal digital assistant, a notebook sized computer, a desktop computer, a set top box and a server.

21. (Previously Presented) An apparatus comprising:

storage medium having stored therein a plurality of programming instructions designed to receive a plurality of unique constituting elements of a data structure transmitted in a pre-determined order, to infer a plurality of corresponding cookie representations for the received unique constituting elements, and to receive the constituting elements of the data structure in a representative form encoded with cookie representations; and

at least one processor coupled to the storage medium to execute the programming instructions.

22. (Previously Cancelled Without Prejudice).

23. (Previously Presented) The apparatus of claim 21, wherein said programming instructions are designed to infer a unique one-byte numeric representation for each of the first 128 unique constituting elements transmitted, and a unique two-bytes representation for each of the next 32,460 unique constituting elements transmitted.

24. (Original) The apparatus of claim 21, wherein said programming instructions are further designed to reconstitute the constituting elements of the data structure, received in said representative form, based on the inferred cookie representations.

25. (Original) The apparatus of claim 21, wherein said programming instructions are designed to perform said receive, infer, receive, and re-constitute

for a XML data structure, said constituting elements comprising tag names, attribute names and attribute values.

26. (Original) The apparatus of claim 21, wherein said apparatus is a selected one of a wireless mobile phone, a palm sized personal digital assistant, a notebook sized computer, a desktop computer, a set top box and a server.

Appendix B – Copies of Evidence Submitted

No evidence has been submitted under 37 C.F.R. 1.130, 1.131, or 1.132. No evidence entered by Examiner has been relied upon by Appellants in the appeal.

Appendix C – Related proceedings

None.